

3. I am the author of 50 articles and published abstracts in the area of anti-infectives and musculoskeletal disease.

4. In support of the enablement of the compounds claimed in the above application, I present herewith data from tests performed under my direct supervision (Exhibit A).

5. Eight separate studies were conducted with the bacterium *Escherichia coli* (*E. coli*). The tests involved intraperitoneal challenge of C57BL6 mice with a single dose of 21,000 c.f.u./mouse at -24 hours with survival as endpoint. Test compounds were administered orally or by intraperitoneal injection at doses of between 0.01 and 100 mg/kg (sid and bid) at days -1 and -1 to +12. The results are summarized in Table 1 (Exhibit A).

6. Studies with the Ebola virus comprised two separate studies: (a) casuarine by intraperitoneal injection of single doses at 10 mg/kg and 100 mg/kg; (b) 3,7 diepicasuarine administered by intraperitoneal injection at a dose of 2 mg/kg (bid) at days -1 to +12. The tests involved intraperitoneal challenge of Balb/C mice (10 per group) with a single dose of 1,000 p.f.u./mouse at -24 hours with survival as endpoint. The results are summarized in Table 1 (Exhibit A).

7. The tularemia studies used the live vaccine strain (LVS) of the bacterium *Francisella tularensis* (the causative agent of tularemia), which is highly pathogenic in mice. The tests involved intraperitoneal challenge of C57BL6 mice (5 per group) with a single dose of 11,500 c.f.u./mouse at -24 hours with survival as endpoint as well as the intradermal challenge of C57BL6 mice (5 per group) with a single dose of 34,500 c.f.u./mouse at day 0, also with survival as endpoint. For the intraperitoneal challenge, test compounds were administered by intraperitoneal injection at doses of between 0.1 and 10 mg/kg (sid) at -24 hours. For the intradermal challenge, test compounds were administered orally at doses of between 0.2 and 2 mg/kg (sid) at days -1 to +12. . The results are summarized in Table 1 (Exhibit A).

8. The anthrax studies used strain 34F2 (Sterne) of the bacterium *Bacillus anthracis* (the causative agent of anthrax). The tests involved intraperitoneal challenge of C57BL6 mice (2-8 per group) with a single dose of 9×10^7 c.f.u./mouse at day 0 with survival as endpoint. Test compounds were administered by intraperitoneal injection at a dose of 10 mg/kg (sid) at -24

hours, and orally at doses of between 0.2 and 2 mg/kg (sid) at days-1 to +9. The results are summarized in Table 1 (Exhibit A).

9. As a person of skill in the art, I conclude that the experimental details and data referred to above indicate that the compounds claimed in the above application have antiviral and/or antibacterial activity.

10. I further declare that all statements of the foregoing declaration made of my own knowledge are true and that all statements made upon information and belief are believed true and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above identified application or any patent issuing thereon.

Signed by me this 18th day of January, 2010.

A handwritten signature in black ink, appearing to read 'J. Tinsley', with a stylized flourish at the end.

Dr Jonathon Mark TINSLEY

Exhibit A

| | Casuarine | 3,7 diepicasuarine |
|------------------|-------------------|------------------------|
| E. Coli | 40 - 75% | 40 – 80% |
| Ebola | 20% survival | Not active |
| Tularemia | 20 - 40% survival | 60% Survival |
| Anthrax | 40-50% Survival | 40-50% Survival |